

## Notice of Allowability

Application No.

10/500,351

Examiner

Anne R. Kubelik

Applicant(s)

DANIELL, HENRY

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 6/28/07.
2. ☒ The allowed claim(s) is/are 14 and 21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Examiner's Amendment*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jay Sanders on 14 September 2007.

IN THE CLAIMS:

Claim 14 (currently amended):

A plastid transformation vector for stably transforming a plastid, said plastid vector comprising, as operably linked components, a first flanking sequence, at least one regulatory sequence operable in a plastid, a DNA sequence coding for a protective antigen ~~capable of expression in a plastid~~, a DNA sequence coding for a chaperonin, and a second flanking sequence.

Claim 21 (currently amended):

A plastid transformation vector for stably transforming a plastid, said plastid vector comprising, as operably linked components, a first flanking sequence, at least one regulatory sequence operable in a plastid, a DNA sequence coding for a protective antigen ~~capable of~~

Art Unit: 1638

~~expression in a plastid~~, a DNA sequence coding for a chaperonin, and a second flanking sequence, wherein said protective antigen is a bacterial antigen.

## IN THE ABTRACT:

~~Vaccines for conferring immunity in mammals to infective pathogens are provided, as well as vectors~~ Vectors and methods for plastid transformation of plants to produce protective antigens and vaccines for oral delivery are provided. ~~The invention further provides transformed plastids having the ability to survive selection in both the light and the dark, at different developmental stages by using genes coding for two different enzymes capable of detoxifying the same selectable marker, driven by regulatory signals that are functional in proplastids as well as in mature chloroplasts. The invention utilizes antibiotic free selectable markers to provide~~ provides edible vaccines for conferring immunity to a mammal against Bacillus anthracis, as well as Yersina pestis. ~~The vaccines are operative by parenteral administration as well. The invention also extends to the transformed plants, plant parts, and seeds and progeny thereof. The invention is applicable to monocot and dicot plants.~~

## IN THE TITLE:

EXPRESSION OF PROTECTIVE ANTIGENS IN TRANSGENIC CHLOROPLASTS  
METHOD FOR THE TRANSFORMATION OF PLANT CELL PLASTIDS

Art Unit: 1638

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (571) 272-0801. The examiner can normally be reached Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached at (571) 272-0975.

The central fax number for official correspondence is (571) 273-8300.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Anne R. Kubelik, Ph.D.  
September 14, 2007

/Anne Kubelik/  
Primary Examiner